



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/816,855	04/05/2004	Akihiro Okano	US01-03060	1830

21254 7590 06/09/2006

MCGINN INTELLECTUAL PROPERTY LAW GROUP, PLLC  
8321 OLD COURTHOUSE ROAD  
SUITE 200  
VIENNA, VA 22182-3817

EXAMINER

RICHER, AARON M

ART UNIT

PAPER NUMBER

2628

DATE MAILED: 06/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/816,855	<b>Applicant(s)</b> OKANO, AKIHIRO	
	<b>Examiner</b> Aaron M. Richer	<b>Art Unit</b> 2628	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 24 March 2006.  
 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
 6) ☒ Claim(s) 1-20 is/are rejected.  
 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☒ The drawing(s) filed on 24 March 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) ☐ All b) ☐ Some \* c) ☐ None of:  
 1. ☐ Certified copies of the priority documents have been received.  
 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
 \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |  |
|--|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)                        |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____   |

## **DETAILED ACTION**

### ***Response to Arguments***

1. Applicant's arguments filed March 24, 2006 have been fully considered but they are not persuasive.
2. As to claims 1, 8, and 15, applicant argues that Weitbruch's invention does not perform contrast inversion on the blurred image signal. Applicant further argues that Weitbruch's invention does not blur an image. Examiner notes that p. 3, sections 0076-0078 describe an averaging or summing of pixels which results in a color distortion of the original image. This signal is then contrast-inverted (p. 4, section 0079). Based on the broad definition of "blur", defined by The American Heritage Dictionaries as "to make indistinct and hazy in outline or appearance; obscure" or "to lessen the perception of; dim", it is noted that the color distorted image that is contrast-inverted is indeed a "blurred image signal".
3. As to claims 2, 3, 5, 6, 9, 10, 12, 13, and 16-19, applicant argues that the quantizer in Crinon is not concerned with preventing burn-in, and would not have been obvious to combine with Weitbruch. It is agreed that Crinon is not concerned with preventing burn-in. However, both Weitbruch and Crinon are concerned with combining image signals, as described in previous rejections to claims 1 and 2. One skilled in the art, when looking to improve on the image-combination teachings of Weitbruch, would certainly look to other image-combination techniques, such as those disclosed in the previously cited sections of Crinon. It is further argued that Crinon does not blur an image, but using the broad definition of the word "blur" recited above, a combination of

Art Unit: 2628

two images does actually blur an image, by obscuring the two images that are combined.

4. It is noted that a new examiner has taken over the examination of this case, and therefore the rejections have been rewritten for convenience and clarity. However, none of the grounds of rejection have changed.

### ***Drawings***

5. The drawings were received on March 24, 2006. These drawings are acceptable.

### ***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1, 8, and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Weitbruch (U.S. Publication 2004/0165064).

8. As to claims 1 and 8, Weitbruch discloses a device for preventing burn-in of a display screen of an image display device, the device comprising:

a blurring device for applying a blurring process to an input image signal to obtain a blurred image signal (fig. 7; p. 2, sections 0023-0024; the “combined picture” from the

Art Unit: 2628

overlay of inverted image and previous image results in image degradation which corresponds to a "blurred image");

and a contrast inversion device for inverting contrast of a luminance level of the blurred image signal to generate a burn-in prevention image signal (p. 4, sections 0079, 0081; the "inverted picture" drawn on top of the original to prevent burn-in corresponds a contrast inversion device).

9. As to claim 15, Weitbruch discloses a display apparatus comprising:

a display device having a display screen (fig. 20, element 10);

a contour modification circuit for blurring an input image to obtain a blurred image when the input image is a still image (fig. 20, elements 12,13,15,16; processing still images is also mentioned in p. 1, section 0014 as a static menu is displayed for some number of minutes and a "ghost" menu is visible on the next scene);

a contrast inversion circuit for inverting contrast of a luminance level of the blurred image to obtain a contrast inverted image (fig. 8; fig. 20, elements 12,13,15,16);

and a driver for displaying the contrast inverted image on the display screen when the input image is a still image (fig. 8; fig. 20, elements 10,11,13,14).

### ***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2628

11. Claims 2, 3, 5, 6, 9, 10, 12, 13, and 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weitbruch in view of Crinon (U.S. Publication 2002/0191846).

12. As to claims 2, 9, 16, and 18, Weitbruch does not disclose a device wherein pixel data of the input image signal is grouped into a plurality of pixel blocks, each pixel block includes  $N$  rows.times. $M$  columns of pixels and the blurring device is a quantizer that quantizes the pixel data of the input image signal for each pixel block. Crinon, however, discloses an image divided into non-overlapping macroblocks, which correspond to a plurality of pixel blocks that can consist of any number of rows or columns of pixels (p. 1, section 0010). Crinon further discloses a quantizer to handle the macroblock input, which works to combine foreground and background images (p. 3, section 0038). The quantizer from Crinon would be used in the burn-in compensation method of Weitbruch, as Weitbruch's invention "wiped" the screen. It would have been obvious to one skilled in the art to modify Weitbruch to utilize a quantizer in "wiping" in order to speed image input as taught by Crinon.

13. As to claims 3, 6, 10, 13, and 19, Crinon discloses a device for varying a size of the pixel block for each field of the input image signal (p. 2, section 0030; changing macroblock dimensions correspond to the ability to vary size of a pixel block for each field).

14. As to claims 5, 12, and 17, Crinon discloses a device wherein pixel data of the input image signal is grouped into a plurality of pixel blocks, each pixel block includes  $N$  rows.times. $M$  columns of pixels (see rejection of claim 2), and the blurring device is a mosaicking circuit that mosaicks the pixel data of the input image signal for each pixel

Art Unit: 2628

block (p. 1, section 0010). Macroblocks and vectors are used to align an individual macroblock with a corresponding mosaic sample array. This mosaicking creates a combined image that would result in a blurred image that Weitbruch's invention could then apply contrast inversion to. Also, motivation for combining the two inventions can be found in the rejection to claim 2.

15. Claims 4, 11, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weitbruch in view of Hamilton (U.S. Publication 2001/0035874).

16. As to claims 4, 11, and 20, Weitbruch does not disclose a device for applying a position variation process to the burn-in prevention image signal to shift, with an elapse of time, a display position on the display screen of a display object that is displayed on the basis of the input image signal. Hamilton, however, does teach these limitations in the form of a method of periodically changing location of textual information (p. 1, sections 0007-0008). It would have been obvious to one skilled in the art to modify Weitbruch to utilize image shifting in order to provide another effective means for preventing burn-in as taught by Hamilton.

17. Claims 7 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weitbruch in view of Criton and further in view of Hamilton.

18. As to claims 7 and 14, Weitbruch in view of Crinon teaches the device of claim 5. Neither of these two references teaches applying a position variation process to the burn-in prevention image signal to shift, with an elapse of time, a display position on the display screen of a display object that is displayed on the basis of the input image signal. Hamilton, however, does teach these limitations in the form of a method of

Art Unit: 2628

periodically changing location of textual information (p. 1, sections 0007-0008). It would have been obvious to one skilled in the art to modify Weitbruch to utilize image shifting in order to provide another effective means for preventing burn-in as taught by Hamilton.

### ***Conclusion***

19. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron M. Richer whose telephone number is (571) 272-7790. The examiner can normally be reached on weekdays from 8:30AM-5:00PM.

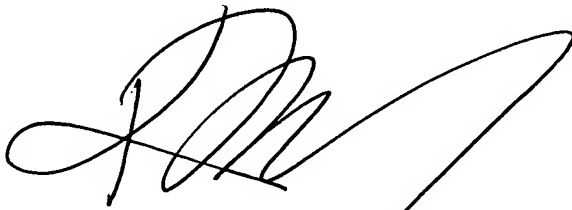
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kee Tung can be reached on (571) 272-7794. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 2628

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AMR  
6/7/06



**Kee M. Tung**  
**Primary Examiner**